

11-26-07

Figure 17(A) is a side elevational view, with portions shown in phantom, of a hand-operable system for fabricating an array of reagent-carrying beads on a multi-well plate, constructed in accordance with an embodiment of the present invention.

5 Figure 17(B) is a top plan view, with portions shown in phantom, of the hand-operable system of Figure 17(A).

Figure 18 is a side cross-sectional view of a fluid distributor having an array of conduits for transferring a liquid from a vessel to an array of wells of a micro-plate or card, according to an embodiment of the present invention.

10 Figure 19(A) is a perspective view showing an array of small openings, surrounded by a channel, formed in one side of the fluid distributor of Figure 18.

11-26-07 Figure 19(B) is a perspective view showing an array of large openings, surrounded by an upstanding peripheral wall, formed on one side of the fluid distributor of Figure 18.

Figure 20 is a side cross-sectional view of the fluid distributor of Figures 18-19 disposed over a vessel containing a liquid, and showing portions of the liquid drawn partially into the conduits of the fluid distributor by capillary action, in accordance with the teachings of the present invention.

20 Figure 21 (A) is a side cross-sectional view of the fluid distributor of Figures 18-20 inverted over a multi-well plate, showing aliquots of liquid that have traveled downward through respective conduits to form drops at each of the large openings, over respective bead-containing wells of the plate.

Figure 21 (B) is a perspective view of the multi-well plate shown under the fluid distributor in Figure 21 (A).

25 Figure 22 is a side cross-sectional view of the inverted fluid distributor of Figure 21 (A), with the drops having been pulled into the wells of the multi-well plate due to adhesive forces with the beads.

DETAILED DESCRIPTION OF ILLUSTRATIVE EMBODIMENTS

The following discussion of the preferred embodiments of the present invention is merely exemplary in nature. Accordingly, this discussion is in no way intended to limit the scope of the invention.

30 One aspect of the present invention provides a system for picking up a plurality of small, reagent-carrying beads from a supply or source area and transferring them onto a substrate, e.g., wells in a micro-card or plate. Generally, the system includes a plurality of projections depending from a movable support structure at fixed, spaced-apart locations. A